05/05/14 Agenda

Review Homework
- Worksheet 4 - Solve Quadratic Functions with ZPP

- Chapter 9 - Quadratic Functions & Equations
- Day 5 - Solving Quadratic Functions (special cases)

- Review Tomorrow!!!
- Quiz on Wednesday!!!

Homework
- Worksheet 5 - Quadratics Day 5

Warm Up - Homework out!

Solve the following quadratics using **ZPP:**

$(x-4)(x+7)=0$

$x-4=0$ $\quad$ $x+7=0$

$+4\ +4$ $\quad$ $-7\ -7$

$x=4$ $\quad$ $x=-7$

$x^2-4x-12=0$

-12 $\quad$ -4

$-6\ \ 2$

$(x-6)(x+2)=0$

$x-6=0$ $\quad$ $x+2=0$

$+6\ +6$ $\quad$ $-2\ -2$

$x=6$ $\quad$ $x=-2$

Solve the following quadratics using **ZPP:**

Wait, what's different? We need to REARRANGE IT !!

$x^2+7x=-12$

$+12 \quad +12$

$x^2+7x+12=0$

$Ax^2+Bx+C=0$

$12 \quad +7$

$3 \quad 4 \quad =7$

$(x+3)(x+4)=0$

$x+3=0 \quad | \quad x+4=0$

$-3 \quad -3 \quad | \quad -4 \quad -4$

$x=-3 \quad | \quad x=-4$

$2x^2-9x=x^2-20$

$-x^2 \quad -x^2$

$x^2-9x=-20$

$+20 \quad +20$

$x^2-9x+20=0$

$(x-4)(x-5)=0$

$x=4 \quad x=5$

These have a NEGATIVE A value.

We need to FACTOR OUT GCF OF -1 !!

$-2x^2-5x+3=0$

$-1 \quad -1 \quad -1$

$-1(2x^2+5x-3)=0$

ac -6 $+5$

$-1 \quad 6$

$2x^2-1x+6x-3=0$

	$2x$	-1
x	$2x^2$	$-1x$
$+3$	$+6x$	-3

$-1 \quad | \quad (2x-1)(x+3)=0$

$\cancel{-1 \neq 0} \quad | \quad 2x-1=0 \quad | \quad x+3=0$

$+1 \quad +1 \quad | \quad -3 \quad -3$

$\frac{2x}{2}=\frac{1}{2} \quad | \quad x=-3$

$x=\frac{1}{2}$

$-3x^2+15x-12=0$

$-3(x^2-5x+4)=0$

These are missing BX TERM (MIDDLE TERM)

We can use SQUARE ROOTS to solve these!!

$\sqrt{x^2} = \sqrt{4}$

$x = 2 \quad x = -2$

$x = \pm 2$

$x^2 - 4 = 0$

$(x+2)(x-2) = 0$

$\frac{4x^2}{4} = \frac{64}{4}$

$\sqrt{x^2} = \sqrt{16}$

$x = \pm 4$

$x^2 - 3 = 0$

$+3 \quad +3$

$\sqrt{x^2} = \sqrt{3}$

$x = \pm\sqrt{3}$

$\frac{3x^2}{3} - \frac{75}{3} = 0$

$x^2 - 25 = 0$

$+25 \quad +25$

$x^2 = 25$

$\frac{4x^2}{4} + \frac{28}{4} = \frac{0}{4}$

$x^2 + 7 = 0$

$-7 \quad -7$

$\sqrt{x^2} = \sqrt{-7}$ ← CAN'T $\sqrt{\ }$ A NEGATIVE NUMBER

NO SOLUTION

$9(x^2 + 1) = 9$